Abstract

Wireless sensor node refers to a group of specifically designed, fabricated, dispersed and dedicated sensors for monitoring and recording the physical conditions of the environment and organizing the collected data at a location. Internet of things (IoT) is a network of physical devices and it is tagging our day-to-day objects with our lives. To access data from the sensor node through web page is much easier way. In this paper an attempt is made to design web based approach to monitor weather parameters and their conditions. The webpage is an interface between user and the weather monitoring system. To acquire and transmit weather parameters, wireless sensor node is designed and fabricated using Arduino UNO board. Also, to connect the sensor node to the internet to send the data to the cloud an ESP8266 Wi-Fi device is interfaced with Arduino. The weather parameters such as atmospheric temperature, humidity, sunlight (intensity), and rainfall are measured and transmitted over the internet. A webpage is created to display the present and past values of the measured parameters. The page also displays the current status of the parameters being measured. This page is linked
with the website so that the parameters can be accessed over the internet.

References

9. DHT11 Datasheet
15. AUTHOR DETAILS:
16. Immanuel J. received the M.Sc., M.Phil. and Ph.D. degrees in Instrumentation Technology from Gulbarga University, Gulbarga, KA, India, in 2005, 2008, and 2014 respectively.
17. Currently, he is a Guest Lecturer in the Department of Instrumentation Technology at Gulbarga University Post Graduate Centre, Raichur, KA, India. His research interests includes embedded systems, fuzzy logic control systems, MATLAB/DSP/PC based measurement,
acquisition, and control. He has published and presented more than 16 papers in the journals of national/ international repute. He is a life member of the Instrument Society of India.

18. Rekha Patil received the M.Sc., degree in Computer Science from Gulbarga University, Gulbarga, KA, India, and M.Phil Computer Science from Vinayak Mission University, Salum, Tamil Nadu, India in 2005, and 2009 respectively.

19. Currently, she is a Guest Lecturer in the Department of Computer Science at Gulbarga University Post Graduate Centre, Raichur, KA, India. Her research interests include Discrete Mathematical structures, Data Structures, Software Engineering, java & html programming. She has published and presented more than 04 papers in the journals of national/ international repute.

20. L. Shrimanth Sudheer received the M.Sc., M.Phil. and Ph.D. degrees in Instrumentation Technology from Gulbarga University, Gulbarga, KA, India, in 2002, 2007, and 2014 respectively. Currently, he is a Guest Lecturer in the Department of Instrumentation Technology at Gulbarga University Post Graduate Centre, Raichur, KA, India. His research interests include embedded systems, fuzzy logic control systems, and PC based acquisition, measurement, and control. He has published and presented more than 30 papers in the journals of national/ international repute. He is a member of the Instrument Society of India, and associate of IETE, India.

21. Parvathi C. S. received the B.E. degree in Instrumentation Technology from PDA College of Engineering, Gulbarga University, KA, in 1981, M.Tech. degree in Instrumentation and Control Engineering from REC, Calicut, in 1983, and Ph.D. degree in Applied Electronics from Gulbarga University, Gulbarga, KA, India, in 2003. Currently, she is a Professor and Chairperson of the Department of Instrumentation Technology at Gulbarga University Post Graduate Centre, Raichur, KA, India. She has published more than 35 papers in journals of national/international repute. Her research interests include Fuzzy Control Systems, PC/DSP/ MATLAB based measurement, acquisition, and control, and process/ industrial control instrumentation. She is a member of ISTE and also the Instrument Society of India.

22. P. Bhaskar received the M.Sc., M.Phil., and Ph.D. degrees in Instrumentation from Sri Krishnadevaraya University, Anapatpur, AP, India, in 1989, 1991, and 2001, respectively.

23. Currently, he is a Professor in the Department of Instrumentation Technology at Gulbarga University Post Graduate Centre, Raichur, KA, India. He has published more than 45 papers in journals of national/international repute. He has also authored a book on 8051 microcontroller. His research interests include Scientific/Analytical Instrumentation, Embedded Systems, and Intelligent Control Systems. He is a member of the Instrument Society of India.

Index Terms

Computer Science  Wireless
Keywords